

TITLE: FLIP UP GUN SIGHT

BACKGROUND OF THE INVENTION

Flip up gun sights are currently being used on guns including AR-15 and M-16
5 rifles, but the sight arm of the sights are subject to being displaced downwardly at
inopportune times, examples of which include moving through trees or bushes, climbing
through a window, or maneuvering around vehicles. The current flip up rear sight becomes
useless if a foreign object pushes up against the aperture.

What is needed is a flip up front or rear sight which is immune to being rendered
10 inoperative by environmental conditions of use.

SUMMARY OF THE INVENTION

The basic concept of the flip up sight of this invention is applicable to both the
front and rear sights. In each case a base member is provided which may be attached to the
15 flat top AR upper receiver including the rear most slot for the rear flip up sight. Other
optical or night vision devices may be mounted on the same receiver as the flip up rear
sight only requires a minimum of space.

A sight arm is pivotally connected to the base member and is spring biased
downwardly against a support arm pivotally attached to the opposite end of the base
20 member and which is spring biased upwardly into engagement with the bottom side of the
sight arm. Cooperating lock means are provided at the outer end of the sight arm and
upper end of the support arm to lock the sight arm in a raised position making it resistant to
impact from foreign objects that would otherwise cause it to be displaced from its raised
operative position.

25 When the sight arm is to be lowered it is first raised off of the support arm and the
support arm is then pivoted downwardly under the sight arm which is also pivoted
downwardly on top of the support arm thereby locking it in a lowered position flush against
the upper receiver. When not in use the flip up sight measures only 5/8" tall which means
the rear sight will not interfere with the use of popular combat sights such as the AimPoint
30 CompM2, Trijicon ACOG, and EOTECH holographic sight. If the operator experiences a

failure with his AimPoint or EOTECH sight, then he can still utilize the flip up rear sight by looking through the useless optical sight.

BRIEF DESCRIPTION OF THE DRAWINGS

5 Figure 1A is a top plan view of a rifle including the front and rear flip up sights of this invention.

 Figure 1B is a front side elevational view showing both of the front and rear flip up sights in their raised operative positions.

 Figure 1C is a view similar to 1B but showing the front and rear flip up sights in
10 their lowered positions.

 Figure 2 is a side elevational view of the rear flip up sight shown in 1B in a raised position.

 Figure 3 is a view similar to Figure 2 but from the opposite side.

 Figure 4 is a side elevational view of the rear sight of Figure 1C in a down position.

15 Figure 5 is a view similar to Figure 4 but of the opposite side.

 Figure 6 is a top plan view thereof.

 Figure 7 is an end elevational view from the right hand end of Figure 6 showing the rear sight in its raised position.

20 Figure 8 is an end elevational view of the front flip up sight taken from the right end as viewed in Figure 1B.

 Figure 9 is a view similar to Figure 8 but of the opposite end.

 Figure 10 is a side elevational view from the front side as viewed in Figure 1B.

 Figure 11 is a view similar to Figure 10 but of the opposite side.

 Figure 12 is a cross sectional view taken along line 12-12 in Figure 9.

25 Figure 13 is a side elevational view of the front flip up sight as seen in Figure 1C with the sight in a lowered position.

 Figure 14 is a top plan view thereof.

DETAILED DESCRIPTION OF THE INVENTION

In Figures 1A-1C, a rifle 10 includes a front flip up sight 12 and a rear flip up sight 14. These sights are shown in their raised positions in Figure 1 and in their lowered positions in Figure 1B and in Figure 1C.

The basic invention of both the front and rear flip up sights is the same and the sights differ from each other as to the details required for each of the sights.

The front sight 12 includes a base member 16 having a sight arm 18 pivotally connected to a first end 20 of the base member 16 and spring biased downwardly by a compression spring 22. The outer end 24 of the sight arm 18 is engaged on its lower side 26 by a support arm 28 pivotally connected to the second end 30 of the base member 16. A torsion spring 32 biases the support arm 28 upwardly into locking engagement with the upper end 24 of the sight arm 18. A notch 34 is provided in the bottom surface 26 of the sight arm 18 to receive the upper end of the support arm 18. A stop shoulder 36 extends downwardly from the bottom side 26 of the sight arm 18 and limits upward pivotal movement of the support arm 28. The compression spring 22 pressing the sight arm downwardly and the torsion spring 32 pressing the support arm upwardly taken with the cooperating locking surfaces securely locks the sight assembly in a raised operative position.

Conventional elements of the front sight include a clamp knob 38 and clamp jaws 40 for engaging oppositely disposed slots on the front of the rifle.

Functionally similar components of the rear sight 14 are identified by like reference numerals with the added letter "A" such that the basic components are the base member 16A having the sight arm 18A pivoted at one end with the support arm 20A pivoted at the other end 30A.

The rear sight 14 includes a conventional windage knob 50 not used on the front sight 12.

Thus it is seen that the flip up front and rear sights 12 and 14 may be easily attached or removed from a rifle through operation of the clamp knobs 38 and 38A. When the sights are not being used they are compactly lowered flat against the rifle body thus not

interfering with the use of conventional optical sights on the rifle. The rifle is also easily stored with the sights in their lowered positions.

When the sights are to be used the sight arms 18 and 18A are raised against the compression springs 22 and 22A while at the same time the support arms 28 and 28A are
5 allowed to pivot upwardly in response to the torsion springs 32 and 32A whereby the upper end of the support arms 28 and 28A are locked in the notches 34 and 34A and against the shoulders 36 and 36A. Foreign objects hitting the sights in the raised position will not alter the sight arms 18 and 18A position thus maintaining reliability of usage for the sights at all times. When the sights are to be taken out of use the sight arms 18 and 18A are raised
10 slightly to allow for disengagement of the support arms 28 and 28A which are now pressed downwardly under the sight arms with the sight arms being allowed to pivot downwardly over the support arms such that the sights are maintained in a locked down position when not being used.